

National Aeronautics and  
Space Administration



# Planetary Data Systems (PDS) NASA HQ Update

Becky McCauley Rench, Program Scientist  
Meagan Thompson, Program Executive

Planetary Science Advisory Committee  
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### Independent

Louise Prockter  
PDS Chief Scientist

Ed Grayzeck  
PDS Chief Scientist  
(Emeritus)

### PDS Program @ NASA HQ

Eric Ianson  
Deputy Director, PSD

Meagan Thompson  
PDS Program Executive

Becky McCauley Rensch  
PDS Program Scientist

### PDS Project Office (GSFC)

Tim Mcclanahan  
Project Manager

Tom Morgan  
Dep. Project Manager

David Hollibaugh Baker  
Dep. Project Manager

PDS Project Office  
empowered to  
manage PDS

### Additional Staff

Maria Banks  
Dave Williams  
Sheri Loftin  
Laura Givens

### Discipline Nodes

Atmospheres  
NMSU

Geosciences  
WUSTL

Cartography &  
Imaging Sciences  
USGS Flagstaff

PPI  
UCLA

Ring-Moon  
Systems  
SETI Inst.

Small Bodies  
U Md

### Technical Support Nodes

NAIF  
JPL

Engineering  
JPL

# HQ Priorities for PDS

## Priority #1: Trusted Repository (“Archiving”)

- Peer Review of Input
- Long-Term Stability
  - Simple Data Formats

## Priority #2 (FY20): PDS3-4 Migration

- HQ is eager to see the PDS3-4 migration completed as soon as feasible

## Priority #3: Discoverability and Usability

- Unified Search
- Higher Level Data Products
- Creation and Management of Tools

Main Strategy for PDS:  
LEAN FORWARD

**PDS must  
evolve!!**

A space-themed background featuring a curved view of the Earth at the bottom, a bright sun or star in the lower left, and various celestial bodies including Saturn, Mars, and the Moon against a starry sky with nebulae.

## PDS Senior Review

- PDS Cooperative Agreements expire in late 2020
- NASA HQ delayed Senior Review for renewal cooperative agreements
  - Until a larger scale review of the Planetary Data Ecosystem can be completed
    - more about this later in the talk
- PDS Nodes are able to request a 1-year funded extension to continue the current cooperative agreements through late 2021

# Strategy for Data Management and Computing for Groundbreaking Science 2019-2024

In December 2019, SMD published a report developed by a working group at NASA HQ

- Goals:
  1. Develop and Implement Capabilities to Enable Open Science
  2. Continuously Evolve Data and Computing Systems
  3. Harness the Scientific Community and Strategic Partnerships for Innovation
- PSD is looking at a variety of ways to embrace this strategy, including:
  - Making plans and exploring a move of PDS into the cloud environment
  - Completing a broad scale, overarching review of our entire PSD Data Ecosystem

# Planetary Data Ecosystem Review

- PSD has recognized that its data, archiving, tool development, and data programs are disjointed and do not connect under a broad strategy
- PSD will be undertaking a large, broad Planetary Data Ecosystem review by an independent review board (IRB) in Fall 2020
- The IRB will provide findings and recommendations to PSD from at least four sub-panels based on the working group:
  - Sub-Panel 1: Open Data/Open Software/Open Tools
  - Sub-Panel 2: Advanced Computing Capabilities
  - Sub-Panel 3: Archives Modernization
  - Sub-Panel 4: Management and Mission Critical/Enabling Assets

# Planetary Data Ecosystem Review

- Inputs to Review:
  - NAS studies of relevance
  - PDS roadmaps
  - PDS white paper (in development)
  - Additional project/program review materials
  - White papers solicited from the community
- Outcome of Review:
  - Report that includes findings and recommendations that can feed into PSD data ecosystem strategy document

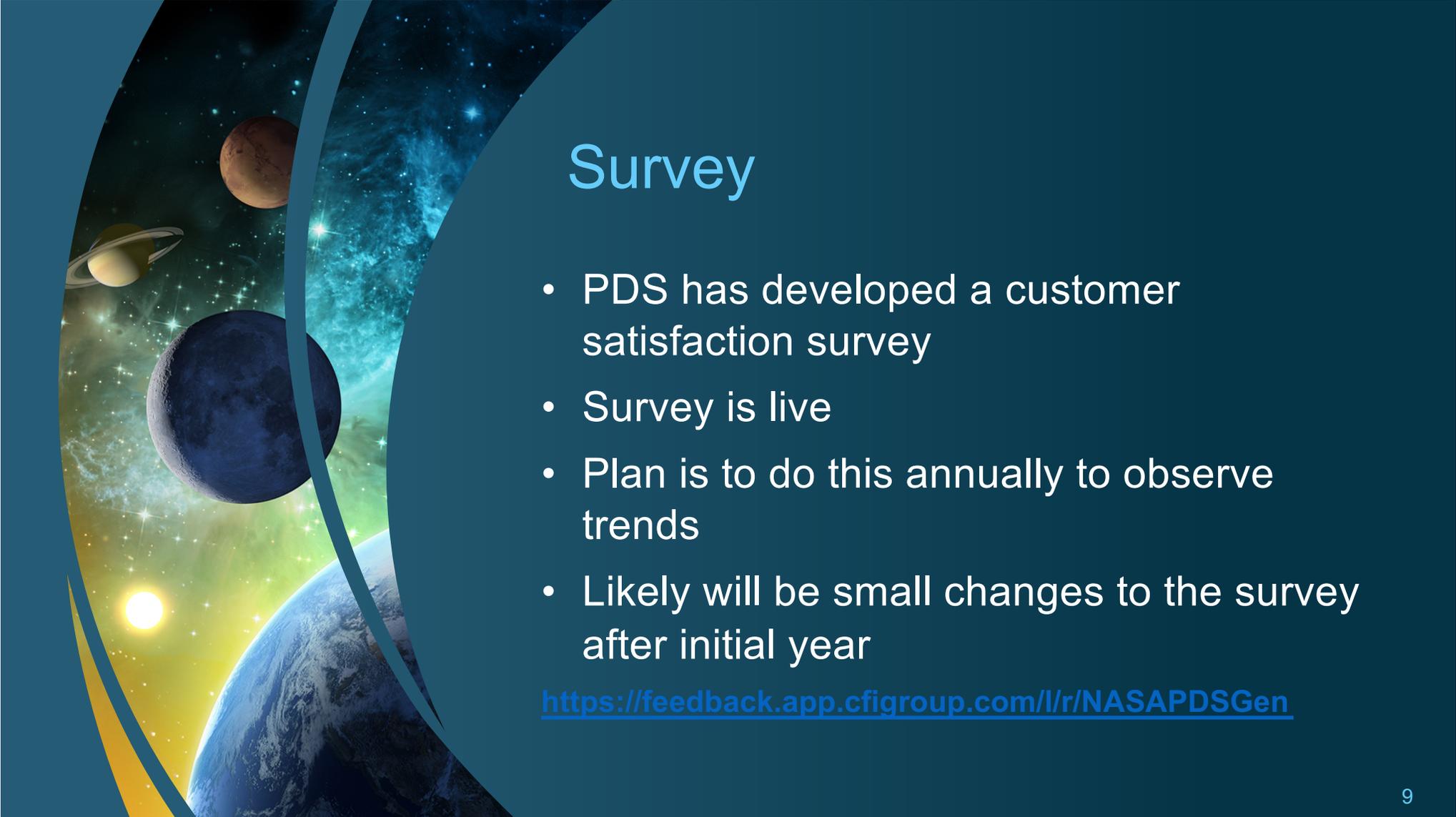
# Planetary Data Ecosystem Review

## Planetary Data Ecosystem

Sub-Panel 1: Open Data/ Open Software/Open Tools	Sub-Panel 2: Advanced Computing Capabilities	Sub-Panel 3: Archives Modernization	Sub-Panel 4: Management and Mission Critical/Enabling Assets	Stakeholder Organizations
<b>PDS Tools</b>	High-End Computing	<b>PDS (incl. all sub-nodes)</b>	Project Offices and Program Management	<b>MAPSIT</b>
<b>Jmars/JAsteroid</b>	Cloud Computing Resources	<b>NSSDCA</b>	<b>AMMOS</b>	<b>IPDA</b>
<b>Treks</b>		Planetary Photojournal	<b>HORIZONS System</b>	
PDART + DAPs		<b>Astromaterials Acquisition and Curation Office</b>	<b>SPICE</b>	
NASA Github/ NASA Planetary GitHub		MoonDB		
ISIS		PetDB		
<b>Ames Stereo Pipeline</b>		<b>Planetary Geologic Mapping Program/ Planetary Cartography Program (incl. Astropedia)</b>		
		<b>RPIF</b>		
		HiTRAN		

**Legend:**

- Data Archive/  
Curated Data
- Community  
Tools/  
Processed Data

A space-themed background featuring a large blue circle on the left containing a yellow sun, a blue planet, a brown planet, and a ringed planet. The background is a dark blue gradient with a nebula and stars.

## Survey

- PDS has developed a customer satisfaction survey
- Survey is live
- Plan is to do this annually to observe trends
- Likely will be small changes to the survey after initial year

<https://feedback.app.cfigroup.com/l/r/NASAPDSGen>



EXPLORE  
together